Salad Potato Technology Project: Meeting 1

Farm of John Stafford , April 14th 2015

Agenda

- The Salad Market
  - Varieties for the market
  - Variety specifications
- Overall costs of production and potential out-turn to get a view of profitability.

- Production issues
  - Field history
  - Soil type and soil structure
  - Soil analysis
  - Seed quality
  - Seed rate and requirement for uniformity (target stem numbers)
  - Fertiliser requirements
  - Seed tuber fungicide treatment if required
  - Machinery for planting
  - Other areas of interest

Teagasc, Bord Bia, IFA and Salad Potato Technology Project

Context

The imports of salad potatoes are estimated at 20,000 tonnes per year. It is estimated up to 15 Irish growers have been supplying approx. 10% to this market each year. There is huge scope to increase the volume of home produced salad potatoes to the domestic market. Increasing the area grown to salad potatoes can thereby displace imported salad potatoes and will also help potato growers diversify existing ware production into a premium market. The production of salad potatoes requires considerable skill and a change of practice if changing from traditional ware potato production. Grower diversification into salad production cannot be taken likely as the supply chain (from seed supply, agronomy, to final sale) need to be secure.

Coping with an expansion of salad potato will be challenging. Potato farmers will require the knowledge and support to enable them to make the necessary changes for a profitable and sustainable future. It is within this context this initiative between Teagasc, Bord Bia, IFA and industry has been agreed.

Purpose

The overall purpose of the program is to increase the level of information to existing growers and ultimately increase the quantity of salad potatoes grown in Ireland. This will involve equipping the industry with the necessary skills and knowledge to sustainably develop their potato enterprises

Objective

The program has five objectives

- Improve existing growers knowledge in all areas (agronomy/storage) of growing salad potatoes
- Increase the total quantity of salad potatoes grown in Ireland
- Grow the market for indigenously grown salad potatoes to keep pace with increased production
- Increase the number of growers supply salad potatoes
- Upskill the industry on storage of salad potatoes
- Leave a legacy of information for growers to use after the program is finished

Methodology

1. Run a Technology transfer project over the next 3 years
2. Regularly meet existing growers through each season at critical times
3. Develop markets and solutions to prolong window where salad potatoes are delivered
4. Provide up to date agronomy notes for growers at each meeting , building to a substantial volume of information over the three years which can be used in the future

Salad Production – John Stafford

Field name	J.Murphy's		
Soil type	Fine Clay with percentage of sand, on a river bank		
Soil analysis pH P K Mg	 6.0 3.8 (Low) 237 (High) 110 (High)		
Manure applied?	0		
Field history Last year potatoes grown? Previous crop? Any groundkeepers? PCN? FLN?	 2011 Spring Barley No		
Stone content?	Very low stone content		
Bed width	72 inches		
Irrigation available?	Yes		
De-stoner webs spacing	30mm Space		
Harvester webs spacing	30mm Space		
Varieties to be grown	Maris Peer (2.5tons 35/55mm) Jester (2.5tons 25/35mm) Charlotte (2.5tons 35/45mm) Jazzy (1ton 35/45mm)		EC2 EC2 EC2 EC3
Market size requirement e.g. 25-42mm	25-45mm		
Seed tuber count (tubers/50kg)	Maris Peer (2.5tons 35/55mm) Jester (2.5tons 25/35mm) Charlotte (2.5tons 35/45mm) Jazzy (1ton 35/45mm)		940 per 50Kg 2650 per 50Kg 810 per 50Kg 910 per 50Kg
Planned seed tuber spacing?	See below		
Seed quality (perhaps we can have a washed sample at the visit of each stock?)	Maris Peer (2.5tons 35/55mm) Jester (2.5tons 25/35mm) Charlotte (2.5tons 35/45mm) Jazzy (1ton 35/45mm)		EC2 Class SE EC2 Class E EC2 Class SE EC3 Class A
Seed tuber fungicide treatment	All seed treated with Imazalil/Thiabendazole Monceren DS at planting		

Variety	Tuber count/50kg	Plant population /ha	Seed spacing (inches)	Tonnes/ha	Area planted (ha)
Maris Peer	940	99,200	4.4	5.15	0.49
Jester	2650	145,800	3*	2.75	0.91
Charlotte	810	75,300	5.7	4.71	0.53
Jazzy	910	67,500	6.5	3.71	0.27
Imagine	?	?	?	?	?

*narrowest setting on planter

Demo site

- Round-up which cleaned the stubble before we ploughed it.
- rotavate on the flat while bed forming, followed by destoning (Grimme CS1500), followed by planting.
- The planting equipment
    - Grimme six row cup planter and also a structural two row belt planter.
- Fertiliser placement unit which applies fertiliser on top of the bed ahead of the planter unit.
    - Normally look to broadcast the potash on the ploughed ground and then apply the phosphorus with a percentage of the nitrogen on the bed.

MARIS PEER

Scottish Seed Stocks
English Seed Stocks

Second early maturity producing moderate yields of very uniform sample. Good resistance to powdery scab, gangrene, damage, bruising and skin spot. Moderately susceptible to drought, potato virus Yo, spraing and slug damage. Susceptible to potato cyst nematode *Globodera rostochiensis* Ro1 and *Globodera pallida* Pa2/3,1. Medium/low dry matter, firm cooked texture, good boiling quality.

Parentage	**120/13 x Ulster Knight**
Breeder	Plant Breeding Institute
Breeder Agent	GB Seed Industry
Breeder Rights (expiry)	not set

IMAGES

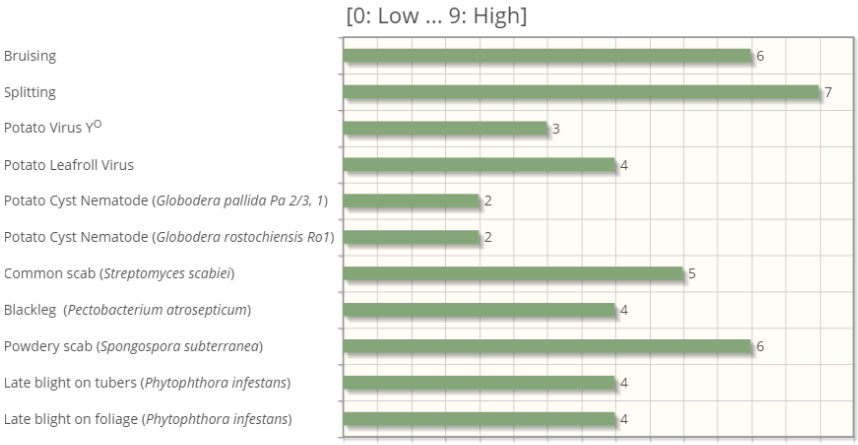



CHARACTERS

TUBER CHARACTERISTICS	
Shape of tuber	Oval
Colour of skin	Cream
Colour of flesh	Cream
Depth of eyes	Shallow - medium
Smoothness of skin	Smooth

BOTANICAL DESCRIPTION	
Colour of base of lightsprout	Pink
Maturity	Second Early
Height of plants	Medium
Colour of flower	Red violet
Frequency of berries	Few

RESISTANCE TO DAMAGE, PESTS AND DISEASES.



Results of National List or Potato Council Independent Variety Trials

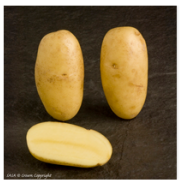
CHARLOTTE

Scottish Seed Stocks
English Seed Stocks

Second early maturity, producing moderate yields of uniform, smooth skinned tubers. . Medium dry matter, waxy cooked texture. Susceptible to late blight on foliage, potato cyst nematode *Globodera rostochiensis* and *Globodera pallida* . Tests show resistance to Blackleg.

Parentage	**Hansa x Danae**
Breeder	Unicopa
Breeder Agent	GB Seed Industry
Breeder Rights (expiry)	not set

IMAGES

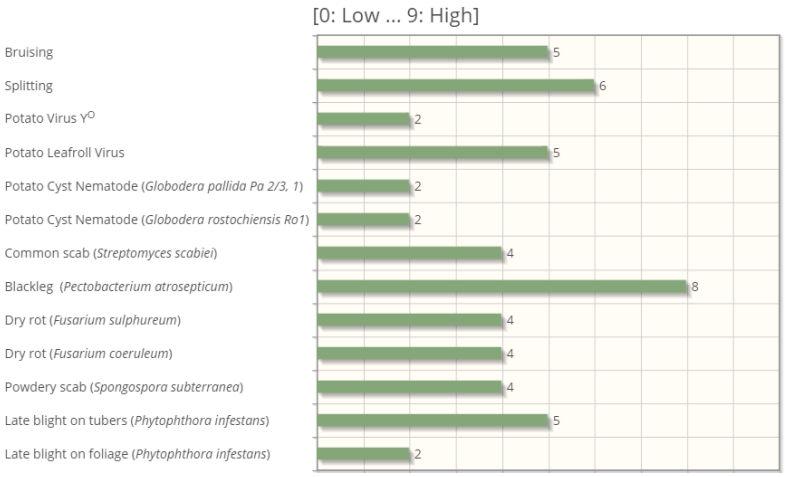


CHARACTERS

TUBER CHARACTERISTICS	
Shape of tuber	Oval - long
Colour of skin	Cream
Colour of flesh	Light yellow
Depth of eyes	Shallow
Smoothness of skin	Smooth

BOTANICAL DESCRIPTION	
Colour of base of lightsprout	Pink
Maturity	Second Early
Height of plants	Medium
Colour of flower	Red violet
Frequency of berries	Few

RESISTANCE TO DAMAGE, PESTS AND DISEASES.



Greenvale AP
Natural choice for fresh potatoes

JESTER

Second early:

Jester is a very high yielding baby potato variety that has performed well in both the UK as well as overseas.

- Very bright white skin finish and cream flesh
- Very high yielding

Overview...

Jester is a very high yielding baby potato variety that has performed well in both the UK as well as overseas.

It has shown good resistance to late blight on tubers, powdery scab, blackleg, common scab and Potato Virus A. Jester has a very bright white skin finish with a cream flesh.

Breeding & licensing...

Breeder	JHI
Parents	Vales Emerald x 12288 AF 23

Tuber characteristics...

Shape of tuber	Short - oval
Depth of eyes	Shallow
Colour of skin	White
Colour of flesh	Cream

Botanical description...

Maturity	Second Early
Height of plants	Short - medium
Colour of flower	Red violet
Colour of base of lightsprout	Violet

Resistance to Damage, Pests and Diseases...

	Low ... High
Dry rot (Fusarium coeruleum)	5
Dry rot (Fusarium sulphureum)	1
Late blight on foliage (Phytophthora infestans)	3
Late blight on tubers (Phytophthora infestans)	6
Powdery scab (Spongospora subterranea)	7
Blackleg (Pectobacterium atrosepticum)	5
Common scab (Streptomyces scabiei)	7
Potato Cyst Nematode (Globodera pallida Pa 2/3, 1)	3
Potato Cyst Nematode (Globodera rostochiensis Ro1)	3
Potato Leafroll Virus	2
Potato Virus A	9
Potato Virus Yn	3
Potato Virus Yo	3
Splitting	7
Bruising	3

IPM POTATO GROUP
QUALITY IN THE BREED | QUALITY IN THE SEED

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Sandyford Industrial Estate, Dublin 18.

Imagine

General Description: Consistent high yields over a number of sites, medium size, very high tuber numbers and very bright skin.

Parentage: Cara x Orla
Maturity: Early Main-crop

Tuber Characteristics

Shape: Round
Skin colour: Yellow with purple eye
Flesh colour: Yellow
Eye Depth: Shallow
Dormancy: Long Dormancy
Dry matter content: 20%
Overall keeping Quality: Good
Damage: 6
Bruising: 6
Yield: Very high yield of medium sized tubers

Resistance to Diseases & Pests:

Common Scab: 7
Powdery scab: 6
Foliage blight: 3
Tuber blight: 4
Blackleg: 6
Wart disease: S
PCN Ro1: S
PCN Pallida: S

JAZZY

BACKGROUND

Breeder:Maintainer	Meijer B V : Meijer B V
Parentage:	Franceline x Cupido
Agent:	Potato Innovations Limited
Introduction:	2009
Market Outlet:	Salad Production

CHARACTERISTICS

Agronomic*		**Disease Resistance***	
Crop Maturity	2nd Early	Foliage Blight	3
Foliage Maturity	8	Tuber Blight	-
Yield	8	Blackleg	-
Skin Colour	White	Common Scab	7
Flesh Colour	L Yellow	Powdery Scab	-
Tuber Shape	8	Gangrene	-
Eye Depth	8	PLRV	7
Uniformity	8	Potato Virus Y	6
Tuber Number/plant	26	Potato Virus X	8
Freedom from Outgrades	8	Potato Virus A	7
Secondary Growth	6	Spraing	8
Dry Matter (%)	16.1	Black Dot	-
Dormancy	4	Black Scurf	-
Drought resistance	-	Skin Spot	-
Nitrogen Variety Group[+]	2	Silver Scurf	-
Damage	7	Dry Rot (F.coer)	-
Bruising	7	Dry Rot (F.samb)	-
		Slugs	-
		PCN Ro1/4, Ro 2/3	S -
		PCN Pa 2, Pa3	S -
[+]RB209 Fertiliser Groupings		Wart Disease[#]	Immune
* Dutch Data		[#] Fysio 1	
Scale 1-9 (9= high degree)		*Scale 1-9 (9= high resistance)*	

COMMENTS

- First early maturity with high yield potential
- Produces high to very high tuber numbers of ideal shape and skin finish
- Excellent taste, texture and cooking qualities
- Good virus disease resistance
- Good resistance to Common Scab
- Susceptible to Foliage Blight